CLAIMS

We claim:

1. A system for facilitating audio/video and data transmission in a networked environment comprising:

a hub;

a plurality of devices connected to said hub; and

a connection of said hub to an ATM network or other network server to facilitate the primary capabilities of both a PBX and a LAN.

2. A system as recited in claim 1 wherein said device is a computer system having a processor, a memory, a communication device, a network interface, a user display, and one or more input devices.

3. A system as recited in claim 1 wherein said device is a telephonic device.

4. A system as in claim 1 wherein said hub is a multiplexer.

5. A system as in claim 1 wherein said hub is a combination of hardware and software comprising:

a plurality of ports for connection of said devices;

a port for connection of said hub to a network or server; and

means for executing algorithms.

6. As system as in claim 5 wherein said algorithms enable said hub to multiplex, encrypt/decrypt data, package data, track system utilization and support the connection of multiple dissimilar said devices.

7. A method for secure communication using a hub comprising the steps of:

bundling information into a plurality of message packages; and

executing algorithms for encryption and decryption.

8. A method for communication between a hub and an ATM wherein said communication occurs at a constant rate of speed for a Cell and wherein said Cell is a fixed size package of data.

9. A method as in recited in claim 8 wherein said Cell carries data from a specific device.

10. A method as recited in claim 9 wherein the total number of said Cell is directly proportional to the number of said devices that are attached to said hub.

11. A method for communicating voice data on a virtual communication line comprising the steps of :

multiplexing and compressing signals to enable the use of fewer communication lines; and

allocating a plurality of Cells for each communications device.

12. A method as recited in claim 11, wherein said Cells have the same or varying destinations in a communication session and said Cells are further allocated to support video and/or audio content.

13. A method as recited in claim 11 wherein said communication comprises the steps of:

transmitting a video image in a video Cell; and

transmitting audio data in an audio Cell.

14. A method as recited in claim 12 wherein said communication session comprises a combination of audio and video Cells, wherein each audio Cell has a single and separate destination on a network and each video may have as many destinations as there are audio Cell destinations.

15. A method for providing enhanced calling features to users of a plurality of devices that are connected on a network wherein said devices are connected to a hub that is connected to an ATM directly or through a server

16. A method as recited in claim 15 wherein said devices are connected through a server to a plurality of said hub thus enabling enhanced calling features between all devices downstream of the server.

17. A method for reducing the cost of multiple communication lines comprising the steps of:

tracking line usage;

tracking the number of Cells that each device sends across the ATM; and

creating virtual lines of communication for said Cells within each device.

18. A method of securing a phone and/or a video communication in a network comprising:

encryption of all audio and/or video transmissions;

generation of a Key to modify audio/video data; and

sending said Key to a receiving hub as part of the transmission.

19. A method for providing 'plug and play' operation for a device connected in a network comprising the steps of:

synchronizing communication between the hub and said device; and

automatically configuring the dynamic properties required for said device.

20. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 7.

21. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 8.

22. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 11.

23. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 15.

24. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 17.

25. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 18.

26. A computer readable storage medium having stored thereon a computer program comprising one or more instructions for implementing the steps recited in claim 19.